

## CLAIMS

1. A fluid treatment system comprising at least two cylindrical vessels, wherein each vessel contains at least one treatment medium selected from ion exchange resins, polymeric adsorbents, inorganic adsorbents and activated carbon; each vessel has at each end a flat head and a fractal liquid transfer manifold; and the system comprises at least one membrane degasifier unit.
2. The fluid treatment system of claim 1 comprising at least one vessel containing an anion ion exchange resin and at least one vessel containing a cation ion exchange resin.
3. The fluid treatment system of claim 2 in which the anion and cation ion exchange resins are beads having a harmonic mean size from 400 microns to 700 microns, and having at least 95% of beads no more than 50 microns from the harmonic mean size.
4. The fluid treatment system of claim 3 in which water is treated at a flow rate from 10 m<sup>3</sup>/hour to 60 m<sup>3</sup>/hour.
5. The fluid treatment system of claim 4 in which said at least one vessel containing an anion ion exchange resin and said at least one vessel containing a cation ion exchange resin are substantially equal in size.
6. The fluid treatment system of claim 5 having two vessels containing an anion ion exchange resin and two vessels containing a cation ion exchange resin.
7. The fluid treatment system of claim 6 in which water is treated at a flow rate from 40 m<sup>3</sup>/hour to 60 m<sup>3</sup>/hour.
8. The fluid treatment system of claim 7 constructed in two parts, each on a support frame, and each part measuring no more than 2.30 m wide by 2.37 m high by 6.08 m long.
9. The fluid treatment system of claim 8 in which an inside diameter of each vessel is from 1.1 m to 1.25 m.
10. The fluid treatment system of claim 9 in which a height of each vessel is from 1.2 m to 1.3 m.